

REMARKS

In the present application, claims 1-20 are pending. Claims 1-20 are rejected. Claims 1, 10, and 16 have been amended. Claim 21 has been added. No new matter has been added. As a result of this response, claims 1-21 are believed to be in condition for allowance.

Claim Rejections – 35 USC § 112

The Examiner rejected claims 1, 10, and 16 as being indefinite for failing to particularly point out and distinctly claim the subject matter of the invention. Specifically, the Examiner noted that the limitations “most comprehensive” and “next most comprehensive” are vague and indefinite. Claims 1, 10, and 16 have been amended to remove the language “in a hierarchical manner and organized so as to first execute a network configuration discovery protocol expected to provide most comprehensive network configuration information, followed by a network configuration discovery protocol expected to provide next most comprehensive network configuration information”. It is now affirmatively recited that the network discovery function is invoked “for examining the network using individual ones of a plurality of network configuration discovery protocols that are executed sequentially”. As the language cited by the Examiner as giving rise to indefiniteness has been removed, the Examiner’s rejection of claims 1, 10, and 16 is rendered moot.

Claim Rejections – 35 USC § 102

The Examiner rejected claims 1-2, 4-5, 10-11, and 13 as being anticipated by U.S. Publication No 2002/0133573 by Matsuda et al. The Examiner asserts that Matsuda et al. teaches, at page 3, paragraphs 34-36, “executing the invoked network discovery function for examining the network using individual ones of a plurality of network configuration discovery protocols” and “that are executed sequentially in a hierarchical manner ...”. The Examiner asserts a variety of citations as substantiation of the following:

- Page 3, paragraph 34 “shows two different protocols”
- Page 4, paragraph 41 “shows a first and second discovery sequentially”
- Page 5, paragraph 46 “does not limit discovery to dhcp”
- Page 8, paragraph 93 [sic] – 85 “teaches service discovery through hyper text transfer protocol and service location protocol”

- Figure 6 and Page 6, paragraph 60 “dhcp then dns is an order.”

Applicant respectfully responds that, in fact, Matsuda et al. do nowhere teach or otherwise disclose executing a network discovery function using “a plurality of network configuration discovery protocols”. As there is no teaching of such a plurality, there is further no teaching of a plurality of discovery protocols executed in sequence.

Claim 1 recites:

1. A computer implemented method for discovering data communication network configuration information, comprising:

invoking a network discovery function;

executing the invoked network discovery function for examining the network using individual ones of a **plurality of network configuration discovery protocols** that are **executed sequentially**; and

while executing the invoked network discovery function, building a list containing discovered network configuration information. (emphasis added)

The Examiner is in error when asserting that Matsuda et al. teach at Page 3, paragraphs 34-36 “executing the invoked network discovery function for examining the network using individual ones of a plurality of network configuration discovery protocols” Not only does Matsuda et al. make no mention of “a plurality of network configuration discovery protocols”, Matsuda et al. states clearly at Page 3, paragraph 36, “Service discovery is accomplished within the disclosed automatic network configuration. A designated service device utilizes **a unique protocol** to gather individual service lists from multiple NOA devices on a network.” (emphasis added) As is evident, Matsuda et al. teaches service discovery using a single “unique protocol.” As a result Matsuda et al. fail to teach “a plurality of network configuration discovery protocols” as claimed.

Before proceeding, it is advantageous to briefly make clear an important distinction between two separate entities which are erroneously, but repeatedly, conflated by the Examiner, namely offering DNS and DHCP services on the one hand, and service discovery on the other hand. As Matsuda et al. recites at page 5, paragraph 47, “These NOA servers provide configuration services, such as DNS, DHCP, service discovery, and user management features …”. Service discovery is separate and distinct from provision of the DNS service and the DHCP service. In general, Matsuda et al. teaches at page 3, paragraphs 34-35 that a NOA device may first start up on a network as a client and check to see if there is a server on the network offering DNS and DHCP services. If there is such a server on the network, the NOA device remains a client. If, however, there is no such server, the NOA device may function as a server and provide DNS and DHCP services to the network. As described later, at page 4, paragraph 41, the process of NOA device checking to see if a DHCP enabled server is present on the network involves the use of a single discovery protocol, DHSP Discover. As is evident, the offering of DNS and DHCP services is quite different and distinct from executing the DHCP discovery protocol.

Returning to the Examiner’s assertions regarding claim 1, Matsuda et al. does not teach the sequential execution of a plurality of network configuration discovery protocols as claimed. While Matsuda et al. does mention two protocols at page 3, paragraph 34, namely DNS and DHCP, there is not mentioned a plurality of **discovery** protocols.

While Matsuda et al. may teach at page 4, paragraph 41 “a first and second discovery sequentially” as stated by the Examiner, claim 1 recites “a plurality of network configuration discovery protocols that are executed sequentially”. The Examiner’s citation refers to Fig. 3 wherein there is shown repeated issuance of a single discovery protocol, DHCP Discover. A single discovery protocol repeated multiple times is not equivalent to a plurality of discovery protocols executed sequentially. The Examiner is correct that page 5, paragraph 46 teaches the use of “other protocols having similar functionality”, however, the substitution of one such protocol for the described DHCP protocol results in the single substituted protocol being executed multiple times as before. For the same reasons as discussed above, such an arrangement fails to teach a plurality of discovery protocols executed sequentially as claimed. Applicant again makes note of page 3, paragraph 36 of Matsuda et al. wherein it is stated “Service discovery is accomplished within the disclosed automatic network configuration. A

designated service device utilizes a **unique protocol** to gather individual service lists from multiple NOA devices on a network.”

Lastly, with reference to Fig. 6 and its description at page 6, paragraph 60, the Examiner states that “DHCP then DNS is an order.” While the verbiage directed to “order” has been removed from claim 1, a brief examination of this citation makes clear the teachings of Matsuda et al. and the elements of claim 1. Fig. 6 and the accompanying explanation describe how an NOA server initiates at block 608 DHCP services and “initiates DNS and service discovery at processing block 610.” The NOA then “broadcasts a DHCP Discover across the network...”. Therefore, while “DHCP then DNS” may be an order, they are not an order of sequentially executing a plurality discovery protocols as claimed.

For the above noted reasons, Matsuda et al. fails to teach “executing the invoked network discovery function for examining the network using individual ones of a **plurality of network configuration discovery protocols** that are **executed sequentially**”. As a result claim 1 is in condition for allowance. As claims 2 and 4-5 are dependent upon claim 1, they are likewise in condition for allowance. Claim 10 similarly recites “to execute the invoked network discovery function to examine the network using individual ones of a plurality of network configuration discovery protocols that are executed sequentially”. For the reasons discussed above, claim 10 is similarly in condition for allowance. As claims 11 and 13 depend upon claim 10, they are likewise in condition for allowance.

Claim Rejections – 35 USC § 103

The Examiner rejected claims 3 and 12 as being unpatentable over Matsuda et al. in view of Funk et al. (US 5,937,162). The Examiner further rejected claims 6-9, 14-17, and 19-20 as being unpatentable over Matsuda et al. in view of Perlman et al. (US 5,128,926). Lastly, the Examiner rejected claims 3 and 12 as being unpatentable over Matsuda et al. in view of Perlman et al. in further view of Funk et al.

Applicant takes no position on the appropriateness of the combinations of art recited above. Applicant does note, however, that all of the rejected claims depend upon one of independent claims 1, 10, and 16. As discussed at length above, Matsuda et al. fails to teach an element common to all of claims 1, 10, and 16, namely “executing the invoked network discovery function for examining the network using individual ones of a plurality of network

S.N. 09/768,568

Art Unit: 2155

configuration discovery protocols that are executed sequentially". As neither Funk et al. nor Perlman et al. teach this element, no combination of the cited art, such a combination neither suggested nor deemed appropriate, can teach or suggest this element. As Examiner makes no further argument that claims 1, 10, or 16 are not patentable, and as all of claims 3, 6-9, 12, 14-17, and 18-20 depend upon claims 1, 10, and 16, such claims are likewise in condition for allowance.

New Claim

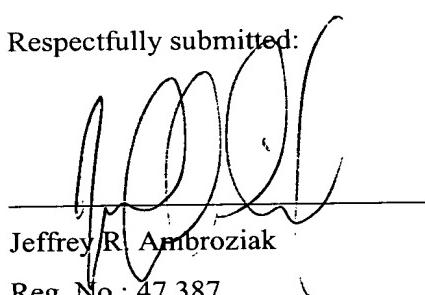
Claim 21 has been added and recites the discovery protocols to be invoked. No new matter has been added.

S.N. 09/768,568
Art Unit: 2155

An earnest and thorough attempt has been made by the undersigned to resolve the outstanding issues in this case and place same in condition for allowance. If the Examiner has any questions or feels that a telephone or personal interview would be helpful in resolving any outstanding issues which remain in this application after consideration of this amendment, the Examiner is courteously invited to telephone the undersigned and the same would be gratefully appreciated.

It is submitted that the claims herein patentably define over the art relied on by the Examiner and early allowance of same is courteously solicited.

Respectfully submitted:



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17 May 05

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